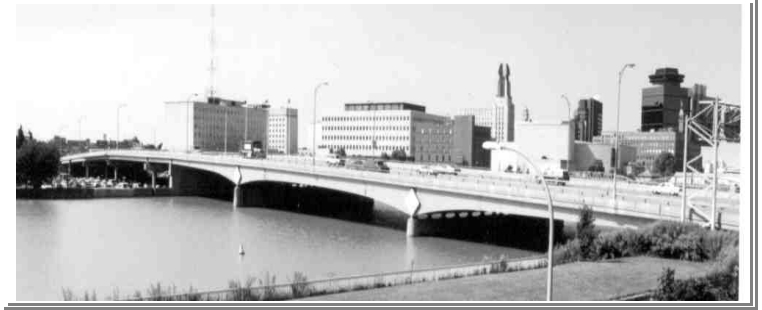


The Troup-Howell Bridge

Troubled Bridge over Water

By Howard Ressel

The 11th of the 12 vehicular bridges constructed over the Genesee River within the City limits was the Troup-Howell Bridge. This structure was built to connect Troup Street on the west with Howell Street on the east and was the first stage in construction of the southern leg of the proposed Inner Loop and Interstate 490. Originally conceived to be part of the Eastern and Western Thruway connection, the bridge was built prior to finalization of the alignment for these routes. By 1949 plans were developing which would place the Eastern Thruway connection in a facility along the subway bed. This 4-lane facility would have co-existed with the subway. The final alignment of the Western Thruway connection was not determined until the late 1960's. Today the Troup-Howell Bridge carries Interstate 490 through the City of Rochester connecting to the New York State Thruway in Victor, Ontario County in the east and in LeRoy, Genesee County in the west. It also serves as the southern leg of the improved Inner Loop opened in 1974.



Starting in 2003, the New York State Department of Transportation intends to replace the Troup-Howell Bridge. Over its 45 years of service the bridge has been reconstructed, widened and rehabilitated many more times than most bridges of its age and type. This is the story of the I-490 Bridge, a Troubled Bridge over Water.

Plans for the original structure were first announced in 1949. Originally proposed to be 6 lanes wide and Rochester's largest bridge, the Troup-Howell Bridge was built between 1953-1955 at a cost of \$ 2,694,248. The bridge opened on December 1, 1954 at 11:00 am, 6 months ahead of schedule, but also prior to its ultimate completion. The bridge was opened early to alleviate traffic congestion when the Clarissa Street Bridge underwent last minute repairs. With the Clarissa Street Bridge (known today as Ford Street) under repair and the busy holiday rush already in progress, City officials were concerned there would be significant traffic congestion downtown. With the Troup-Howell Bridge only requiring its final asphalt wearing surface, the State allowed the bridge to open to traffic early. The opening was signaled by the removal of a green wooden barrier by Mayor Samuel Dicker as the "official" ribbon cutting was reserved for the spring. The first person to cross the bridge was Charles S. Lee of Dartmouth St. who was drafted for the job by a long-time friend William Babcock, a State safety engineer.

The original bridge project required the acquisition of only two buildings, "neither of them of historic interest" according to Norman W. Krapf, Chief Design Engineer of the District 4 Department of Public Works at the time. Although the then 115 year old Landmark Campbell-Whittlesey house was

saved, the Morgan house would be removed (see A Bridge By Another Name). To save the Campbell-Whittlesey house and the R. J. Strassenburgh building (most likely related to the Planetarium) a reverse curve was required. At that time, such construction was considered unusual and required approval from Albany. Of course over the years many more structures would be removed for the construction of the Inner Loop and eventually I-490. The most

Bridge Facts

Year Built:	1953-55
No. Spans:	12 (originally 15) Over: South Ave, I490 Access ramps, abandoned subway and Lehigh Valley RR, Genesee River, Old Erie RR, (Parking lots and Exchange Blvd.
Type:	Cantilevered multi-girder
Length:	358 m (1,175')
Width:	33.2 m (109')
No. Lanes:	8 (6 through)
Traffic Volumes (Vehicles per day)	
1955	16,000
1972	49,000
1993	80,400
2023 (projected)	89,500

notable bridge feature was how it sliced through the roof of the Erie Lackawanna Railroad freight house on Exchange Street.

Unfortunately opening the bridge early turned out to be a big mistake and was the beginning of a rocky future for the bridge. When the Contractor returned in the spring, Rochester's winter worst scarred the bridge as de-icing salts chewed away at the yet unfinished deck. Repairs were made, the wearing surface completed and the bridge was opened permanently on June 22, 1955 at 1:45 p.m. At the proceedings were Mayor Peter Barry and District Engineer Elmer G. H. Youngman. The first private citizen across the bridge was Cliff Tarrant, Republican leader of the Fourth Ward. The first commercial vehicle was from Frank A. Rivers Furniture Co (interestingly, on the side of a building off South Avenue is a sign advertising Rivers furniture which was located just off the end of the bridge. The sign is still visible today from the Troup-Howell Bridge although it's obstructed by a bill board). By 1959 it was evident that the deterioration had not stopped and a preventive maintenance contract was scheduled. In 1960, one-half of the bridge was closed at a time and the now 5 year old bridge deck was rehabilitated and the bridge repainted at a cost of \$ 274, 000.

As early as 1962 the State's District Engineer, Bernard F. Perry, discussed the potential for an 8 lane bridge. As plans developed to reconstruct I-490 and reconfigure the bridge as a limited access expressway, deterioration continued. In 1970 chunks of concrete began to fall from the bridge damaging some cars in the city owned parking lot under the west end of the structure. In the fall of 1968 the Regional Design Engineer, John Ten Hagen recognized that the bridge was "in bad shape". This was only 8 years after the deck was rehabilitated and 13 years after the bridge opened to traffic. This may have been the biggest factor in the decision to replace the entire deck when the bridge was widened to accommodate the Western Expressway and the reconfigured Inner Loop. On June 24, 1971 the bridge was closed for two years to complete this major renovation and widening. At this time several spans at the east end were replaced to accommodate new ramps and connections to I-490 and the future I-390 which was never extended into the City limits. The work was designed by Erdman & Anthony Consulting Engineers (designers of the present replacement project) and constructed by S. J Groves and Sons Inc.



The basic bridge structure, piers and foundation from the original bridge were retained although they were lengthened to accommodate the wider structure. A new deck was placed and the new structural steel added. At this time all direct local access was eliminated and the facility became a limited access freeway. The pedestrian sidewalk, prominent on the original structure, was removed. The Erie-Lackawanna railroad continued to function under the bridge until approximately 1976. The freight house was torn down in the mid 70's just a few short years after it was altered to accommodate the widening and reconstruction project. Today "wings" on the facade, built to accommodate the freight house, remind us of its presence.

A Bridge By Another Name

In the early 80's, just 10 years after the 'new' bridge reopened it was evident that salt had once again taken its toll on the 'old' Troup-Howell Bridge. In 1984 a contract was awarded to Oak Grove Construction to rehabilitate the deck and place a Latex Modified Concrete overlay. One of the main difficulties with this project was dealing with the significantly higher volumes of traffic (see Bridge Facts), especially truck traffic, now using the bridge. No longer was a complete bridge closure possible. Traffic was maintained on two lanes in each direction while one-half the bridge was rehabilitated. For a short time period only one mainline lane in each direction remained opened. Traffic back-ups were severe at times.

Another problem was the significant movement of the superstructure under heavy traffic. The structure had quite a "bounce" when heavy trucks crossed the bridge. Although not a structural concern, the Contractor had to use flaggers to slow traffic during the deck pour for fear the excessive movement would damage the new overlay. The present deterioration and delamination of the 1984 overlay is evident in the many pothole patches now showing on the deck. This may have resulted from the deck's structural flexibility.

In 1992 an additional project was initiated to rehabilitate deck joints which had not been adequately repaired in 1984.

By 1993 detailed design studies were underway for the rehabilitation of Interstate 490 from the Erie Canal to the Genesee River. Based on concerns from the Regional Bridge Maintenance Engineer, it was decided to further evaluate the Troup-Howell Bridge as part of the planning studies for I-490. Although the bridge was rated in fair condition, there were concerns with the condition of the wearing course and the concrete deck, the drainage system, bridge joints railings and other bridge components. Originally it was assumed that a rehabilitation of the bridge could be incorporated into the larger I-490 project. Further study determined that it would be very difficult and require a significant investment of funds to repair and upgrade the bridge to provide redundancy for the existing pin and hanger connections, repair fracture critical welds replace the bridge deck and wearing surface and retrofit the bridge to present seismic standards. The combination of problems and the desire to provide a project life of 50 years ultimately lead to the decision to replace most of the structure including all of the original 1955 structure (the newer eastern spans will be retained and rehabilitated).

Many names were suggested for the new bridge over the Genesee River. The first reference found was in an April 8, 1949 article which referred to the bridge as Howell-Troup.

The name, as it is known today as Troup-Howell, derived from Troup Street on the west and Howell Street on the east which the bridge connected. With the construction of the Inner Loop not much remains of Troup Street or Howell Street but they both do exist.

Troup Street was originally named for Robert Troup, a New York lawyer who became the second land agent of the vast Pultney interests of pioneer times. The Village of Charlotte was named for Robert Troup's daughter.

Howell Street was named for Nathaniel W. Howell, a Judge and eminent Canadaigua who served as legal advisor to early land companies.

Other names were suggested for the bridge as well. Col. Samuel C. Pierce, a Civil War figure and educator; Louis Henry Morgan a well known Ethnologist and Anthropologist whose home was demolished for the construction of the bridge; Susan B. Anthony, leader of the suffragette movement; Elisha Johnson a former Mayor, developer and Civil Engineer; and finally, Jonas Salk, developer of the Polio Vaccine were all suggested name sakes for the bridge.

Although the City Planning commission recommended the name Troup-Howell in 1954, there was one other attempt to rename the bridge. The name, Rennes-Rochester Friendship Bridge was conceived to honor our first Sister City. Although a bill was passed by the NY Assembly in 1967, apparently it died in a Senate conference committee.

Interestingly enough a letter to the editor chastised City Council's suggestion to rename the bridge on the grounds that naming it as such would be an insult to the French. It seems the writer felt the bridge was not particularly beautiful and worthy of such an honor.

The Troup-Howell Bridge has had its share of troubles over the years. From an early opening which allowed salt deterioration to occur at a rapid rate, to its short lived deck rehabilitation in 1984, the bridge certainly has had a rocky past. The New York State Department of Transportation has invested an estimated \$ 36 million over the last 45 years. For many years the bridge has brought thousands of commuters downtown, ferried many visitors to and through the area and served our communities' transportation needs. The bridge is prominent in any postcard view of downtown. Its location frames some exciting changes planned for the Erie Harbor on the Genesee River in Downtown Rochester just south of the structure. Will the replacement serve traffic and its community better than the original? Will the new bridge make a fitting statement on the sky line and enhance further "postcard" views? One sure fact, the new Troup-Howell Bridge should last longer and serve our community better than its predecessor.



History of major rehabilitation and repairs to the Troup-Howell Bridge

Year	1955	1960	1972	1984	1992
Description	Initial Construction	Deck Rehab.	Widening and Reconst.	Deck Rehab.	Joint Replacement
Contractor	A.A. Johnson & Son	Standard Engineering Corp.	S. J. Groves	Oak Grove Const.	C.P. Ward
Designer	Seely, Stevenson & Value	Unknown	D. Tuttle (Erdman Anthony)	R. Christ (NYSDOT)	K. Rocco (NYSDOT)
Engineer-in-Charge	B. Hoadley	Unknown	J. Edinger	D. Walker	B. Walker
Cost (in 2000 \$) ¹	\$15,737,102	\$1,081,204	\$ 16,000,000 (estimated)	\$3,173,225	\$191,779

1- Comparison costs based on average 4% inflation from Initial year to year 2000. Cost based on best available data. Costs do not include routine maintenance repairs.

The total value of all work on the bridge since 1955 is well over \$ 36,000,000. The cost of the proposed replacement structure is approximately \$ 20,000,000.